

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-40³⁹ have been cancelled.

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1/9/04*

40. (previously presented) A kit for treating varicose veins, comprising:
a catheter sized for insertion into a vein, the vein having an inner wall, the catheter having an energy application device that is expandable into apposition with the inner wall of the vein;

a medical tumescent fluid which when applied to tissue, causes tumescence of the tissue; and

a.

a fluid delivery vessel capable of delivering a sufficient amount of the tumescent fluid into the tissue surrounding the vein to cause the tissue to reach a tumescent state and thereby compress the vein.

41. (previously presented) The kit of claim 40 wherein the fluid delivery vessel is capable of delivering a sufficient amount of the solution into the tissue surrounding the vein so as to cause the tissue to reach a tumescent state to exsanguinate the vein of blood.

42. (previously presented) The kit of claim 40 further comprising a flushing fluid selected from the group consisting of:

saline;

vasoconstrictive agent;
sclerosing agent;
high impedance fluid; and
heparin.

43. (previously presented) The kit of claim 40 wherein the tumescent fluid comprises an anesthetic.

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44. (previously presented) The kit of claim 40 wherein the tumescent fluid comprises an anesthetic and a vasoconstrictive drug.

45. (previously presented) An apparatus for applying energy from a power source to a hollow anatomical structure, the power source being responsive to temperature signals to control the level of power, the apparatus comprising:

a catheter having a working end and a lumen configured for fluid delivery;
a first plurality of expandable leads disposed at the working end and a second plurality of expandable leads separately disposed at the working end longitudinally away from the first plurality of expandable leads, wherein the leads are formed and mounted to the catheter such that when in an unconfined configuration, the leads have sufficient strength to move themselves outward into non-penetrating apposition with the inner wall, and further, the leads are formed and mounted to the catheter such that they do not have sufficient strength to prevent the reduction of the diameter of the inner wall wherein as

the inner wall reduces, the leads remain in non-penetrating apposition with the inner wall and move inward with it, the leads also having a distal portion with an uninsulated distal tip, each lead electrically connected to the power source; and

a plurality of temperature sensors located at the leads, the sensors providing temperature signals representative of the temperature sensed at the leads by each sensor;

wherein the expandable leads are configured so as to permit the catheter to be moved in the hollow anatomical structure at the same time that the leads are applying energy to the hollow anatomical structure.

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cont.

46. (previously presented) The apparatus of claim 45 further comprising means for averaging the temperature signals to provide an averaged temperature signal;

47. (previously presented) The apparatus of claim 45 wherein leads of the sensors are interconnected such that the temperature signals are averaged.

48. (previously presented) The apparatus of claim 45 wherein the expandable leads are staggered in a longitudinal direction.

49. (previously presented) The apparatus of claim 48 further comprising means for averaging the temperature signals.

50. (previously presented) The apparatus of claim 49 wherein leads of the sensors are interconnected such that the temperature signals are averaged.

51. (previously presented) The apparatus of claim 45, further comprising a single electrode lead disposed forward of the first plurality of expandable leads and the second plurality of expandable leads.
